

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2009; month=8; day=24; hr=14; min=38; sec=6; ms=647;]

=====

Application No: 10588417 Version No: 2.0

Input Set:**Output Set:**

Started: 2009-08-07 13:20:34.396
Finished: 2009-08-07 13:20:41.426
Elapsed: 0 hr(s) 0 min(s) 7 sec(s) 30 ms
Total Warnings: 13
Total Errors: 0
No. of SeqIDs Defined: 32
Actual SeqID Count: 32

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 402	Undefined organism found in <213> in SEQ ID (22)
W 402	Undefined organism found in <213> in SEQ ID (23)
W 213	Artificial or Unknown found in <213> in SEQ ID (25)
W 402	Undefined organism found in <213> in SEQ ID (27)
W 402	Undefined organism found in <213> in SEQ ID (29)

SEQUENCE LISTING

<110> EVANS, Donald L. et al.

<120> Novel Teleost Derived Antimicrobial Polypeptides

<130> G25-085US Nat

<140> 10588417

<141> 2009-08-07

<150> PCT/US05/05398

<151> 2005-02-18

<150> US 60/545,370

<151> 2004-02-18

<150> US 60/623,909

<151> 2004-11-01

<160> 32

<170> PatentIn version 3.4

<210> 1

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 1

Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly
1				5					10						15	

Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly
			20					25						30	

<210> 2

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 2

Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly
1				5					10			

<210> 3
<211> 203
<212> PRT
<213> Ictalurus punctatus

<400> 3

Met Ser Ala Gln Ala Glu Glu Thr Ala Pro Glu Ala Ala Ala Pro Val
1 5 10 15

Gln Pro Ser Gln Pro Ala Ala Lys Lys Lys Gly Pro Ala Ser Lys Ala
20 25 30

Lys Pro Ala Ser Ala Glu Lys Lys Asn Lys Lys Lys Lys Gly Lys Gly
35 40 45

Pro Gly Lys Tyr Ser Gln Leu Val Ile Asn Ala Ile Gln Thr Leu Gly
50 55 60

Glu Arg Asn Gly Ser Ser Leu Phe Lys Ile Tyr Asn Glu Ala Lys Lys
65 70 75 80

Val Asn Trp Phe Asp Gln Gln His Gly Arg Val Tyr Leu Arg Tyr Ser
85 90 95

Ile Arg Ala Leu Leu Gln Asn Asp Thr Leu Val Gln Val Lys Gly Leu
100 105 110

Gly Ala Asn Gly Ser Phe Lys Leu Asn Lys Lys Lys Phe Ile Pro Arg
115 120 125

Thr Lys Lys Ser Ser Val Lys Pro Arg Lys Thr Ala Lys Pro Thr Lys
130 135 140

Lys Pro Ala Lys Lys Ala Ala Lys Lys Lys Lys Arg Val Ser Gly Val
145 150 155 160

Lys Lys Ala Thr Pro Pro Pro Glu Lys Thr Ser Lys Pro Lys Lys Ala
165 170 175

Asp Lys Ser Pro Ala Val Ser Ala Lys Lys Ala Ser Lys Pro Lys Lys
180 185 190

Ala Lys Gln Thr Lys Lys Thr Ala Lys Lys Thr
195 200

<210> 4
<211> 956
<212> DNA
<213> Ictalurus punctatus

<400> 4
cggcacgagg gttcaatagc atctcaaggc gcttcagaac ttaaagttga accatgtctg 60

ctcaggctga ggaaactgca ccagaagcag cagcaccagt acaaccatca caaccagcgg 120

ccaaaaagaa gggaccgcgc agtaaagcaa agcctgcctc tgcagaaaaa aagaacaaaa 180

agaagaaagg gaaagggccc ggaaagtaca gccagctggg gatcaatgct atccaaacgc 240

tgggagagag aaacggctcg tctcttttta agatctacaa cgaggcgaag aaagtgaact 300

ggtttgacca gcagcacggg cgcgtgtacc tccgtactc catccgcgcg ctgctgcaga 360

acgacacgct cgtgcagggtg aagggctctgg gcgccaacgg ctccctcaag ctcaacaaaa 420

agaagttcat ccccagaacc aagaagagct ctgtaaagcc gagaaagact gcgaaaccga 480

ccaaaaagcc agccaaaaaa gcagcgaaga agaagaaaag ggtcagcggc gtgaagaagg 540

cgactcccc cccagagaaa acctccaaac ccaagaaagc ggataaaagt ccagccgtct 600

ctgccaagaa ggcgagcaag cccaagaaag ctaaacagac aaaaaagact gctaagaaga 660

cttaaaacgt ttatatcttg catgctttgt gcattaagca ttgcactgcg ggtaaactgc 720

acgctttctg atcgcagttc attaataggc atatgcacag tgtttaacca agtgtgcaag 780

tcactctggg ctcaatgttt tactgatgta accacatgta aataactgta caaagaagga 840

aacaatcact ttgtaacgt ctgctttgtt attatttctt ttctactagt tagctaaaat 900

aactgcttat ggcttctttt aaaataaaat gataaaagaa aaaaaaaaaa aaaaaa 956

<210> 5
<211> 956
<212> DNA
<213> Ictalurus punctatus

<220>
<221> CDS
<222> (54) .. (662)
<223> ncamp-1 nucleic acid and protein sequence

<400> 5
cggcacgagg gttcaatagc atctcaaggc gcttcagaac ttaaagttga acc atg 56
Met

tct gct cag gct gag gaa act gca cca gaa gca gca gca cca gta caa	104
Ser Ala Gln Ala Glu Glu Thr Ala Pro Glu Ala Ala Ala Pro Val Gln	
5 10 15	
cca tca caa cca gcg gcc aaa aag aag gga ccc gcc agt aaa gca aag	152
Pro Ser Gln Pro Ala Ala Lys Lys Lys Gly Pro Ala Ser Lys Ala Lys	
20 25 30	
cct gcc tct gca gaa aaa aag aac aaa aag aag aaa ggg aaa ggg ccc	200
Pro Ala Ser Ala Glu Lys Lys Asn Lys Lys Lys Lys Gly Lys Gly Pro	
35 40 45	
gga aag tac agc cag ctg gtg atc aat gct atc caa acg ctg gga gag	248
Gly Lys Tyr Ser Gln Leu Val Ile Asn Ala Ile Gln Thr Leu Gly Glu	
50 55 60 65	
aga aac ggc tcg tct ctt ttt aag atc tac aac gag gcg aag aaa gtg	296
Arg Asn Gly Ser Ser Leu Phe Lys Ile Tyr Asn Glu Ala Lys Lys Val	
70 75 80	
aac tgg ttt gac cag cag cac ggg cgc gtg tac ctc cgc tac tcc atc	344
Asn Trp Phe Asp Gln Gln His Gly Arg Val Tyr Leu Arg Tyr Ser Ile	
85 90 95	
cgc gcg ctg ctg cag aac gac acg ctc gtg cag gtg aag ggt ctg ggc	392
Arg Ala Leu Leu Gln Asn Asp Thr Leu Val Gln Val Lys Gly Leu Gly	
100 105 110	
gcc aac ggc tcc ttc aag ctc aac aaa aag aag ttc atc ccc aga acc	440
Ala Asn Gly Ser Phe Lys Leu Asn Lys Lys Lys Phe Ile Pro Arg Thr	
115 120 125	
aag aag agc tct gta aag ccg aga aag act gcg aaa ccg acc aaa aag	488
Lys Lys Ser Ser Val Lys Pro Arg Lys Thr Ala Lys Pro Thr Lys Lys	
130 135 140 145	
cca gcc aaa aaa gca gcg aag aag aag aaa agg gtc agc ggc gtg aag	536
Pro Ala Lys Lys Ala Ala Lys Lys Lys Lys Arg Val Ser Gly Val Lys	
150 155 160	
aag gcg act ccc ccc cca gag aaa acc tcc aaa ccc aag aaa gcg gat	584
Lys Ala Thr Pro Pro Pro Glu Lys Thr Ser Lys Pro Lys Lys Ala Asp	
165 170 175	
aaa agt cca gcc gtc tct gcc aag aag gcg agc aag ccc aag aaa gct	632
Lys Ser Pro Ala Val Ser Ala Lys Lys Ala Ser Lys Pro Lys Lys Ala	
180 185 190	
aaa cag aca aaa aag act gct aag aag act taaaacgttt atattctgca	682
Lys Gln Thr Lys Lys Thr Ala Lys Lys Thr	
195 200	
tgctttgtgc attaagcatt gcactgcggg taaactgcac gctttctgat cgcagttcat	742
taagtaggat atgcacagtg tttaaccaag tgtgcaagtc actctgggtct caatgtttta	802
ctgatgtaac cacatgtaaa taactgtaca aagaaggaaa caatcacttt tgtaacgtct	862

gctttgttat tatttctttt ctactagtta gctaaaataa ctgcttatgg cttcttttaa 922

aataaaatga taaaagaaaa aaaaaaaaaa aaaa 956

<210> 6

<211> 203

<212> PRT

<213> Ictalurus punctatus

<400> 6

Met Ser Ala Gln Ala Glu Glu Thr Ala Pro Glu Ala Ala Ala Pro Val
1 5 10 15

Gln Pro Ser Gln Pro Ala Ala Lys Lys Lys Gly Pro Ala Ser Lys Ala
20 25 30

Lys Pro Ala Ser Ala Glu Lys Lys Asn Lys Lys Lys Lys Gly Lys Gly
35 40 45

Pro Gly Lys Tyr Ser Gln Leu Val Ile Asn Ala Ile Gln Thr Leu Gly
50 55 60

Glu Arg Asn Gly Ser Ser Leu Phe Lys Ile Tyr Asn Glu Ala Lys Lys
65 70 75 80

Val Asn Trp Phe Asp Gln Gln His Gly Arg Val Tyr Leu Arg Tyr Ser
85 90 95

Ile Arg Ala Leu Leu Gln Asn Asp Thr Leu Val Gln Val Lys Gly Leu
100 105 110

Gly Ala Asn Gly Ser Phe Lys Leu Asn Lys Lys Lys Phe Ile Pro Arg
115 120 125

Thr Lys Lys Ser Ser Val Lys Pro Arg Lys Thr Ala Lys Pro Thr Lys
130 135 140

Lys Pro Ala Lys Lys Ala Ala Lys Lys Lys Lys Arg Val Ser Gly Val
145 150 155 160

Lys Lys Ala Thr Pro Pro Pro Glu Lys Thr Ser Lys Pro Lys Lys Ala
165 170 175

Asp Lys Ser Pro Ala Val Ser Ala Lys Lys Ala Ser Lys Pro Lys Lys
180 185 190

Ala Lys Gln Thr Lys Lys Thr Ala Lys Lys Thr
195 200

<210> 7
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 7

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Gly Gly Gly
20

<210> 8
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 8

Thr Cys Gly Thr Cys Gly Thr Thr Gly Thr Cys Gly Thr Thr Gly Thr
1 5 10 15

Cys Gly Thr Thr
20

<210> 9
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 9

Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys
1 5 10 15

Ala Lys Gln Thr Lys Lys Thr Ala Lys Lys Thr

Cys Cys Cys Cys
20

<210> 10
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 10

Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala
1 5 10 15

Ala Ala Ala Ala
20

<210> 11
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 11

Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr
1 5 10 15

Thr Thr Thr Thr
20

<210> 12
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 12

Thr Gly Cys Thr Gly Cys Thr Thr Gly Thr Gly Cys Thr Thr Gly Thr
1 5 10 15

Gly Cys Thr Thr
20

<210> 13
<211> 192
<212> PRT
<213> Danio rerio

<400> 13

Met Pro Ala Val Val Glu Glu Ser Ala Pro Ala Pro Ala Pro Ala Pro
1 5 10 15

Ala Glu Lys Lys Ala Lys Pro Ala Val Ala Ala Ser Pro Ala Lys Lys
20 25 30

Lys Lys Lys Lys Ser Lys Gly Pro Gly Lys Tyr Ser Lys Leu Val Thr
35 40 45

Asp Ala Ile Arg Thr Leu Gly Glu Lys Asn Gly Ser Ser Leu Phe Lys
50 55 60

Ile Tyr Asn Glu Ala Lys Lys Val Ser Trp Phe Asp Gln Lys Asn Gly
65 70 75 80

Arg Met Tyr Leu Arg Ala Ser Ile Arg Ala Leu Val Leu Asn Asp Thr
85 90 95

Leu Val Gln Val Lys Gly Phe Gly Ala Asn Gly Ser Phe Lys Leu Asn
100 105 110

Lys Lys Lys Leu Glu Lys Lys Pro Lys Lys Ala Ala Ser Lys Lys Ala
115 120 125

Thr Lys Lys Thr Glu Lys Pro Thr Ser Lys Lys Ala Val Thr Lys Lys
130 135 140

Val Ser Ala Lys Lys Ser Ala Lys Lys Ser Pro Val Lys Lys Lys Thr
145 150 155 160

Pro Lys Lys Thr Ser Val Lys Lys Ala Thr Ala Lys Pro Lys Lys Thr
165 170 175

Ala Ser Lys Lys Pro Lys Ala Ala Ala Lys Lys Lys Thr Lys Ser Lys
180 185 190

<210> 14
<211> 217
<212> PRT
<213> Xenopus laevis

<400> 14

Met	Ala	Leu	Glu	Leu	Glu	Glu	Asn	Leu	His	Ser	Thr	Glu	Glu	Glu	Asp
1				5					10					15	

Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gly	Asp	Glu	Met	Arg	Ser	Arg	Ser	Thr
			20					25					30		

Arg	Asn	Lys	Gly	Gly	Ala	Ala	Ser	Ser	Ser	Gly	Asn	Lys	Lys	Lys	Lys
		35					40					45			

Lys	Lys	Lys	Asn	Gln	Pro	Gly	Arg	Tyr	Ser	Gln	Leu	Val	Val	Asp	Thr
	50					55					60				

Ile	Arg	Lys	Leu	Gly	Glu	Arg	Asn	Gly	Ser	Ser	Leu	Ala	Lys	Ile	Tyr
65					70					75					80

Ser	Glu	Ala	Lys	Lys	Val	Ser	Trp	Phe	Asp	Gln	Gln	Asn	Gly	Arg	Thr
				85					90					95	

Tyr	Leu	Lys	Tyr	Ser	Ile	Lys	Ala	Leu	Val	Gln	Asn	Asp	Thr	Leu	Leu
			100					105					110		

Gln	Val	Lys	Gly	Val	Gly	Ala	Asn	Gly	Ser	Phe	Arg	Leu	Asn	Lys	Lys
		115					120					125			

Lys	Leu	Glu	Gly	Leu	Pro	Tyr	Asp	Lys	Lys	Pro	Pro	Pro	Ala	Lys	Pro
	130					135					140				

Ser	Ser	Ser	Ser	Ser	Ser	Asn	Lys	Lys	Gln	Gln	Gln	Gly	Pro	Ser	Ser
145					150					155					160

Ser	Pro	Ser	Lys	Ser	His	Lys	Lys	Ala	Lys	Pro	Lys	Ala	Lys	Ala	Glu
			165						170					175	

Lys	Glu	Lys	Pro	Lys	Thr	Ser	Ser	Ala	Lys	Ala	Lys	Ser	Pro	Lys	Lys
			180					185					190		

Ser	Ala	Ala	Lys	Gly	Lys	Lys	Met	Lys	Lys	Gly	Ala	Lys	Pro	Ser	Val
			195				200					205			

Arg Lys Ala Pro Lys Ser Lys Lys Ala
210 215

<210> 15
<211> 188
<212> PRT
<213> Mus musculus

<400> 15

Met Ser Val Glu Leu Glu Glu Ala Leu Pro Pro Thr Ser Ala Asp Gly
1 5 10 15

Thr Ala Arg Lys Thr Ala Lys Ala Gly Gly Ser Ala Ala Pro Thr Gln
20 25 30

Pro Lys Arg Arg Lys Asn Arg Lys Lys Asn Gln Pro Gly Lys Tyr Ser
35 40 45

Gln Leu Val Val Glu Thr Ile Arg Lys Leu Gly Glu Arg Gly Gly Ser
50 55 60

Ser Leu Ala Arg Ile Tyr Ala Glu Ala Arg Lys Val Ala Trp Phe Asp
65 70 75 80

Gln Gln Asn Gly Arg Thr Tyr Leu Lys Tyr Ser Ile Arg Ala Leu Val
85 90 95

Gln Asn Asp Thr Leu Leu Gln Val Lys Gly Thr Gly Ala Asn Gly Ser
100 105 110

Phe Lys Leu Asn Arg Lys Lys Leu Glu Gly Gly Ala Glu Arg Arg Gly
115 120 125

Ala Ser Ala Ala Ser Ser Pro Ala Pro Lys Ala Arg Thr Ala Ala Ala
130 135 140

Asp Arg Thr Pro Ala Arg Pro Gln Pro Glu Arg Arg Ala His Lys Ser
145 150 155 160

Lys Lys Ala Ala Ala Ala Ala Ser Ala Lys Lys Val Lys Lys Ala Ala
165 170 175

Lys Pro Ser Val Pro Lys Val Pro Lys Gly Arg Lys
180 185

<210> 16
<211> 213
<212> PRT
<213> Homo sapiens

<400> 16

Met Ser Val Glu Leu Glu Glu Ala Leu Pro Val Thr Thr Ala Glu Gly
1 5 10 15

Met Ala Lys Lys Val Thr Lys Ala Gly Gly Ser Ala Ala Leu Ser Pro
20 25 30

Ser Lys Lys Arg Lys Asn Ser Lys Lys Lys Asn Gln Pro Gly Lys Tyr
35 40 45

Ser Gln Leu Val Val Glu Thr Ile Arg Arg Leu Gly Glu Arg Asn Gly
50 55 60

Ser Ser Leu Ala Lys Ile Tyr Thr Glu Ala Lys Lys Val Pro Trp Phe
65 70 75 80

Asp Gln Gln Asn Gly Arg Thr Tyr Leu Lys Tyr Ser Ile Lys Ala Leu
85 90 95

Val Gln Asn Asp Thr Leu Leu Gln Val Lys Gly Thr Gly Ala Asn Gly
100 105 110

Ser Phe Lys Leu Asn Arg Lys Lys Leu Glu Gly Gly Gly Glu Arg Arg
115 120 125

Gly Ala Pro Ala Ala Ala Thr Ala Pro Ala Pro Thr Ala His Lys Ala